OPTIONAL INFORMATION	
Name of School:	Date of Inspection:
Vocational Program/Course/Room:	Signature of Inspector:

SERVICING MULTI-PIECE AND SINGLE PIECE RIM WHEELS
SELF INSPECTION CHECKLIST

Guidelines: This checklist covers the regulations issued by the U.S. Department of Labor - OSHA under 29 CFR 1910.177 which were adopted by reference. It applies the servicing of multi-piece and single piece rim wheels used on large vehicles such as trucks, tractors, trailers, busses and off-road machines. These regulations do not apply to servicing of rim wheels used on automobiles, or on pickup trucks and vans utilizing automobile tires or truck tires designated "LT." Definitions of underlined terms have been included at the end of the checklist to help you understand some of the questions.

Servicing tires on multi-piece and single piece rim wheels can result in serious injury or death not only to the person performing the task but to anyone in the area. The wheel can be propelled at great distances at great forces. The OSHA standard is quite specific about training requirements.

	Training	Please Circle
1.	Is there a specific training program designed to train students/teachers who service rim wheels in the hazards involved in servicing those rim wheels and the safety precautions to be followed? [29 CFR 1910.177(c)(1)]	Y N N/A DK
2.	Have all students/teachers servicing any rim wheel received training in the correct and safe procedures? [29 CFR 1910.177(c)(1)(i)]	Y N N/A DK

Comments/Corrective Action

3. As part of the training program, have all students/teachers been given the information in charts, rim manuals and the OSHA regulations covered by this checklist? [29 CFR 1910.177(c)(1)(ii)] Y N N/A DK

   Note: Charts should be posted in the shop.

4. If students are unable to read or understand the charts or rim manuals, has the information been conveyed in a manner that they do understand? [29 CFR 1910.177(c)(1)(iii)] Y N N/A DK

5. Have students/teachers who service rim wheels demonstrated and maintained the ability to service rim wheels safely, including acceptable performance of the following tasks: [29 CFR 1910.177(c)(2)]

   (i) Demounting of tires (including deflation)? Y N N/A DK

   (ii) Inspection and identification of rim wheel components? Y N N/A DK

   (iii) Mounting of tires (including inflation with restraining device or other safeguard required by this section)? Y N N/A DK

   (iv) Use of the restraining device or barrier, and other equipment required by this section? Y N N/A DK

   (v) Handling of rim wheels? Y N N/A DK

   (vi) Inflation of tire when a single piece rim wheel is mounted on a vehicle? Y N N/A DK

Comments/Corrective Action

(vii)	An understanding of the necessity of standing outside the trajectory during both inflation of the tire and during inspection of the wheel following inflation?	Y	N	N/A	DK
(viii)	Installation and removal of rim wheels?	Y	N	N/A	DK
6.	Have the students/teachers who service rim wheels been individually evaluated to determine their ability to perform these tasks and to service rim wheels safely? [29 CFR 1910.177(c)(3)] Note: Where an individual has been identified who lacks proficiency in servicing rim wheels, he or she must be provided additional training.	Y	N	N/A	DK

Tire Servicing Equipment

7.	Are restraining devices furnished for inflating tires on multi-piece wheels? [29 CFR 1910.177(d)(1)]	Y	N	N/A	DK
8.	When inflating a tire on a single piece wheel that is not bolted onto the vehicle, are restraining devices or barriers provided? [29 CFR 1910.177(d)(2)]	Y	N	N/A	DK
9.	Does each restraining device or barrier have the capacity to withstand the maximum force that would be transferred to it during a rim wheel separation occurring at 150 percent of the maximum tire specification pressure for the type of rim wheel being serviced? [29 CFR 1910.177(d)(3)(i)]	Y	N	N/A	DK
10.	Are restraining devices and barriers capable of preventing the rim wheel component from being thrown outside or beyond the device or barrier? [29 CFR 1910.177(d)(3)(ii)]	Y	N	N/A	DK

Comments/Corrective Action

11.	Are restraining devices and barriers visually inspected for each of the following prior to each day's use and after any separation of the rim wheel component or sudden release of contained air? [29 CFR 1910.177(d)(3)(iii)]	Y	N	N/A	DK
	(A) Cracks at welds;				
	(B) Cracked or broken components;				
	(C) Bent or sprung components caused by mishandling, abuse, tire explosion or rim wheel separation;				
	(D) Pitting of components due to corrosion; or				
	(E) Other structural damage which would decrease its effectiveness.				
12.	Are restraining devices or barriers exhibiting damage immediately removed from service? [29 CFR 1910.177(d)(3)(iii)]	Y	N	N/A	DK
13.	Are restraining devices or barriers removed from service only returned to service after they have been repaired, reinspected and certified by either the manufacturer or a registered professional engineer as meeting the required strength requirements? [29 CFR 1910.177(d)(3)(iv)]	Y	N	N/A	DK

Comments/Corrective Action

14. Does the air line assembly used for inflating tires have a clip-on chuck; an in-line valve with a pressure gauge or a presettable regulator; and a sufficient length of hose between the clip-on chuck and the in-line valve (if one is used) to allow the student/teacher to stand out of the trajectory? [29 CFR 1910.177(d)(4)] Y N N/A DK

15. Are the current charts or rim manuals containing instructions for the types of wheels being serviced readily available in the service area? [29 CFR 1910.177(d)(5)] Y N N/A DK

16. Are the tools recommended in the rim manual for the type of rim being serviced used to service the rim wheels? [29 CFR 1910.177(d)(6)] Y N N/A DK

Wheel Component Acceptability

17. Is the interchange of components strictly prohibited, except as permitted in the charts or in the applicable rim manual? [29 CFR 1910.177(e)(1)] Y N N/A DK

18. Are all multi-piece wheel components and single piece wheels inspected prior to assembly? [29 CFR 1910.177(e)(2)] Y N N/A DK

Note: Any wheel or wheel component which is bent out of shape, pitted from corrosion, broken, or cracked shall not be used and shall be marked or tagged unserviceable and removed from the service area. Damaged or leaky valves shall be replaced.

Comments/Corrective Action

19. Are rim flanges, rim gutters, rings, bead seating surfaces and the bead areas of tires free from any dirt, surface rust, scale or loose or flaked rubber build-up prior to mounting and inflation? [29 CFR 1910.177(e)(3)] Y N N/A DK

20. Is the size (bead diameter and tire/wheel widths) and type of both the tire and the wheel checked for compatibility prior to assembly of the rim wheel? [29 CFR 1910.177(e)(4)] Y N N/A DK

Safe Operating Procedure
multi-piece rim wheels

21. Have safe operating procedures been established for servicing multi-piece rim wheels? [29 CFR 1910.177(f)] Y N N/A DK

22. Do students/teachers use the following procedures? [29 CFR 1910.177(f)] Y N N/A DK

(1) Tires shall be completely deflated before demounting by removal of the valve core.

(2) Tires shall be completely deflated by removing the valve core before a rim wheel is removed from the axle in either of the following situations:

(i) When the tire has been driven underinflated at 80% or less of its recommended pressure, or

(ii) When there is obvious or suspected damage to the tire or wheel components.

Comments/Corrective Action

(3) Rubber lubricant shall be applied to bead and rim mating surfaces during assembly of the wheel and inflation of the tire, unless the tire or wheel manufacturer recommends against it.

(4) If a tire on a vehicle is underinflated but has more than 80% of the recommended pressure, the tire may be inflated while the rim wheel is on the vehicle provided remote control inflation equipment is used, and no employees remain in the trajectory during inflation.

(5) Tires shall be inflated outside a restraining device only to a pressure sufficient to force the tire bead onto the rim ledge and create an airtight seal with the tire and bead.

(6) Whenever a rim wheel is in a restraining device the student/teacher shall not rest or lean any part of his body or equipment on or against the restraining device.

(7) After tire inflation, the tire and wheel components shall be inspected while still within the restraining device to make sure that they ar properly seated and locked. If further adjustment to the tire or wheel components is necessary, the tire shall be deflated by removal of the valve core before the adjustment is made.

(8) No attempt shall be made to correct the seating of side and lock ring by hammering, striking or forcing the components while the tire is pressurized.

(9) Cracked, broken, bent or otherwise damaged rim components shall not be reworked, welded, brazed, or otherwise heated.

(10) Whenever multi-piece rim wheels are being handled, students/teachers shall stay out of the trajectory unless it can demonstrated that performance of the servicing makes the person's presence in the trajectory necessary.

(11) No heat shall be applied to a multi-piece wheel or wheel component.

Safe Operating Procedures
single piece rim wheels

23. Have safe operating procedures for servicing single piece rim wheels been established? [29 CFR 1910.177(g)] Y N N/A DK

24. Do students/teachers use the following procedures? [29 CFR 1910.177(g)] Y N N/A DK

(1) Tires shall be completely deflated by removal of the valve core before demounting.

(2) Mounting and demounting of the tire shall be done only from the narrow ledge side of the wheel. Care shall be taken to avoid damaging the tire beads while mounting tires on wheels. Tires shall be mounted only on compatible wheels of matching bead diameter and width.

(3) Nonflammable rubber lubricant shall be applied to bead and wheel mating surfaces before assembly of the rim wheel, unless the tire or wheel manufacturer recommends against the use of any rubber lubricant.

Comments/Corrective Action

(4) If a tire changing machine is used, the tire shall be inflated only to the minimum pressure necessary to force the tire bead onto the rim ledge while on the tire changing machine.

(5) If a bead expander is used, it shall be removed before the valve core is installed and as soon as the rim wheel becomes airtight (the tire bead slips onto the bead seat).

(6) Tires may be inflated only when contained within a restraining device, positioned behind a barrier or bolted on the vehicle with the lug nuts fully tightened.

(7) Tires shall not be inflated when any flat, solid surface is in the trajectory and within one foot of the sidewall.

(8) Employees shall stay out of the trajectory when inflating a tire.

(9) Tires shall not be inflated to more than the inflation pressure stamped in the sidewall unless a higher pressure is recommended by the manufacturer.

(10) Tires shall not be inflated above the maximum pressure recommended by the manufacturer to seat the tire bead firmly against the rim flange.

(11) No heat shall be applied to a single piece wheel.

(12) Cracked, broken, bent, or otherwise damaged wheels shall not be reworked, welded, brazed, or otherwise heated.

Definitions:

Charts means the U.S. Department of Labor, Occupational Safety and Health Administration publications entitled "Demounting and Mounting Procedures for Truck/Bus Tires" and "Multi-piece Rim Matching Chart," the National Highway Traffic Safety Administration (NHTSA) publications entitled "Demounting and Mounting Procedures Truck/Bus Tires" and "Multi-piece Rim Matching Chart," or any other poster which contains at least the same instructions, safety precautions and other information contained in the charts that is applicable to the types of wheels being serviced.

Multi-piece rim wheel means the assemblage of a multi-piece wheel with the tire tube and other components.

Multi-piece wheel means a vehicle wheel consisting of two or more parts, one of which is a side or locking ring designed to hold the tire on the wheel by interlocking components when the tire is inflated.

Rim manual means a publication containing instructions from the manufacturer or other qualified organization for correct mounting, demounting, maintenance, and safety precautions peculiar to the type of wheel being service.

Rim wheel means an assemblage of tire, tube and liner (where appropriate), and wheel components.

Single piece rim wheel means the assemblage of single piece rim wheel with the tire and other components.

Single piece wheel means a vehicle wheel consisting of one part, designed to hold the tire on the wheel when the tire is inflated.